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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/092,377

03/05/2002

Akira Morita

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7590

09/20/2004

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EXAMINER

NGUYEN, CHANH DUY

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 09/20/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,377

Applicant(s)

MORITA, AKIRA

Examiner

Chanh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on June 9, 2004 has been entered and considered by examiner.

Specification

2. The abstract of the disclosure is objected to because it exceeds 150 words in length. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. Correction is required. See MPEP § 608.01(b).
3. The typo error of the Serial Number 10/092/356 cited in the first line of the specification should be changed to 10/092,356.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

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1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,366,065 B1 in view of Tamai et al (U.S. Patent No. 6,160,533).

Although the conflicting claims are not identical, they are not patentably distinct from each other because of following reasons:

Claim 1 of Application 10/092,377	Claims 1-6 U.S. Patent No. 6,366,065 B1
The voltage supplying device comprising:	A voltage supplying device which supplies a voltage to a load capacitance to finish charging the load capacitance with a predetermined voltage within a predetermined charging period, the voltage supplying device comprising: a voltage supplying source;
a reference voltage generating circuit having a ladder resistance circuit to which a plurality of resistors are connected in series, which outputs a plurality of voltages divided in the ladder resistance circuit as a plurality of gamma-corrected reference voltages;	
a plurality of first impedance conversion circuits which perform impedance conversion on the plurality of reference voltages from the reference voltage generating circuit and output the converted voltages;	an impedance conversion circuit which performs impedance conversion for a voltage from the voltage supplying source and outputs the converted voltage;

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a voltage selection circuit having a plurality of analogue switches one of which is turned on based on grayscale data, which selects one of the plurality of reference voltages from the plurality of first impedance conversion circuits;	
a second impedance conversion circuit which performs impedance conversion on a voltage from the voltage selection circuit and outputs the converted voltage;	
a first switching element for blocking an output of the second impedance conversion circuit;	a first switching element connected between the impedance conversion circuit and the load capacitance;
a first bypass line for shorting input and output lines of the second impedance conversion circuit; -	a bypass line for bypassing the impedance conversion circuit and the first switching element and supplying a voltage from the voltage supplying source to the load capacitance; and
a second switching element provided on the first bypass line;	a second switching element provided on the bypass line,
a plurality of third switching elements for blocking an output of the plurality of first impedance conversion circuits;	the voltage supplying device as defined in claim 1, further comprising a third switching element connected on a power source line which supplies a power source voltage to the impedance conversion circuit,
a plurality of second bypass lines for shorting input and output lines of the respective plurality of first impedance conversion circuits;	
and a plurality of fourth switching elements provided on the respective plurality of second bypass lines;	
wherein the first switching element is turned on and the second switching element is turned off in the first period of the charging period, and the first switching element is turned off and the second switching element is turned on in the second period of the charging period which follows after the first period;	wherein the first switching element is turned on and the second switching element is turned off in the first period of the charging period; and wherein the first switching element is turned off and the second switching element is turned on in the second period of the charging period which follows after the first period.

and wherein the plurality of third switching elements are turned off and the plurality of fourth switching elements are turned on at least in a final stage of the second period, and the plurality of third switching elements are turned on and the plurality of fourth switching elements are turned off in the other periods of the charging period.	wherein the third switching element is turned off, synchronized with an off operation of the first switching element.
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Note the comparison above, the only different from claim 1 of this application and claim 1 of the U.S. Patent No. 6,366,065 is that the limitation a reference voltage generating circuit, voltage selection circuit and fourth switch are additionally recited. Tamai teaches a reference voltage generating circuit (62) having a ladder resistance circuit (R1-R7) to which a plurality of resistors are connected in series, which outputs a plurality of voltages divided in the ladder resistance circuit as a plurality of gamma-corrected reference voltages (see Figure 4 and see column 16, line 64 through column 17, line 34). Tamai teaches a voltage selection circuit (63) having a plurality of analogue switches (AS1-AS8) one of which is turned on based on grayscale data, which selects one of the plurality of reference voltages. Tamai further teaches a plurality of third switches (S9-S12) and a plurality of fourth switches (S13-14) (see Figure 12). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have used a reference voltage generating circuit, a voltage selection circuit, plurality of third switches and a plurality of fourth switches as taught by Tamai to the voltage supply device of the

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U.S. Patent No. 6,366,065 so as to reduce the number of terminals for receiving the reference voltages (see column 8, lines 10-31 of Tamai).

As to independent claims 10, 13, 15 and 17-18, these claims are analyzed as previously discussed with respect to independent claim 1 above since they recite substantially the same limitations as claim 1.

As to dependent claims 2-9, 11-12, 14, 14, 19-20, these dependent claims are met by both Tamai and claims 1-10 of the U.S. Patent No. 6,366,065.

Response to Arguments

5. Applicant's arguments filed June 09, 2004 have been fully considered but they are not persuasive.

As to the Abstract of the Disclosure, the Abstract of the Disclosure is still objected in this office action since applicant has not submitted the new abstract as requested. For example, there are 23 pages of the amendment faxed on June 09, 2004, but none of them has a replacement abstract. On page 1, last line of the amendment states that " **Replacement Abstract** is on page 21", but page 21 does not have the abstract.

On pages 19-20, applicant simply argues that reference of Morita, but the rejection is over Morita in view of Tamai. Thus while Morita device may differ from the recited device, the claims are obvious over the combination of Morita and Tamai as pointed out in the rejection.

On page 20, applicant argues that "the finding of obviousness in this case is based on nothing more than the invention of the present invention, and is this

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improper". Examiner disagrees with applicant this point of view because the examiner recognizes that obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the suggestion to combine Morita and Tamai is from the prior art of Tamai as pointed out in the rejection, not from applicant's disclosure.

On page 21, applicant argues that "the goal of Tamai is to reduce the number of connection terminals as well as the number of analog switches. Accordingly, Tamai cannot be fairly cited for adding plurality of third switches and adding a plurality of fourth switches to the invention of Morati." However, examiner would like to present his point of view as follows: Tamai uses a reference voltage generating circuit (62) and the analog switches (63), even third switches (S9-S12) and fourth switches (S13-S14) in figure 12 to reduce the number of connection terminal as Tamai cited in column 8, lines 10-31. Thus, without using a reference generating circuit and the switches (i.e. analog switches, third switches, fourth switches) of Tamai, the device ends up with more connection terminals than the Tamai's device.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121

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Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


C. Nguyen
September 19, 2004


CHANH NGUYEN
PRIMARY EXAMINER